



**State of Rhode Island and Providence Plantations**  
**Water Resources Board**  
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## **Assessment of Drought Conditions April 2020**

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**Current Drought Level: Normal** – No drought indicators have been triggered and most of Northern and Central RI has experienced a wet April.

### **Monthly Summary of Conditions (Major Drought Indices)**

- April precipitation in Central and Northern RI was much above normal, Eastern and Southern RI observed normal precipitation, and New Shoreham observed slightly below normal precipitation (greater than 65% of normal). Cumulative two-month (Mar-Apr 20) precipitation is slightly above normal in Central and Northern RI, normal precipitation in Southern RI, and slightly below normal in Eastern RI and New Shoreham. Cumulative three-month (Feb-Apr 20) precipitation was normal or slightly above normal for most of RI, except for Eastern RI and New Shoreham which observed slightly below normal precipitation. [Click here](#) for full monthly report from the National Weather Service.
- Palmer Drought Index (PDI) = All RI, Week Ending April 25<sup>th</sup> = 2.38. Positive PDI indicates a wet phase
  - PDI includes temperature, potential evapotranspiration, and precipitation data.
- April mean streamflow in Southern RI (Pawcatuck Watershed) was normal. The three Northern RI gages (Branch River, Moshassuck River, and the Woonasquaket River) were either on the high end of normal or above normal. This is likely attributed to the much above normal precipitation received in Central and Northern RI.
- March mean groundwater level in Southern RI was normal for all gages, except, EXW 475 in Exeter which was slightly below normal. The three Northern RI gages were on the high end of normal (BUW 187 in Burrillville), above normal (NSW 21 in North Smithfield), and much above normal (CUW 265 in Cumberland).

### **Other Drought Indicators**

- Crop Moisture Index (CMI) = All RI, Week Ending April 25<sup>th</sup> = 1.69. A positive CMI indicates a wet phase.
  - The CMI compares soil moisture needs to available water. CMI is a short-term indicator.
- The Scituate Reservoir surface water level as of 5/1/2020 is at an elevation of 285.38 ft (105.3% of capacity). The current reservoir level is available [here](#) from the Providence Water Supply Board.
- Standard Precipitation Index (SPI) = The one-month and three-month SPI is normal for all of RI. The twelve-month SPI is normal for Southern and Eastern RI and slightly below normal for Central and Northern RI. Maps of SPI across the entire US including RI are available [here](#).
  - The SPI compares the current precipitation interval (one-month, three-month, etc.) to all historical months within that interval (example a weather station with 30 years of data, March 2020 total precipitation is compared with 30 years of March precipitation).

- The U.S. Drought monitor categorized RI for the entire month of April as the “None” drought category. Current and Historic drought categories from the U.S. Drought Monitor are located [here](#).

### **Websites**

- National Weather Service Monthly Precipitation Reports and [RI drought information](#)
- USGS Monthly Streamflow and Groundwater Conditions for past three months
  - [April 2020](#), [March 2020](#), and [February 2020](#)
- Northeast Drought Early Warning System (DEWS) Dashboard - <http://nedews.nrcc.cornell.edu/>
  - Click RI on the map at the top of the Dashboard to see RI specific maps